

with respect to nanotechnology research and development, including the identification of any critical research areas where the United States should be the world leader to best achieve the goals of the Program; and

(13) an analysis of the current impact of nanotechnology on the United States economy and recommendations for increasing its future impact.

(b) **STUDY ON MOLECULAR SELF-ASSEMBLY.**—As part of the first triennial review conducted in accordance with subsection (a), the National Research Council shall conduct a one-time study to determine the technical feasibility of molecular self-assembly for the manufacture of materials and devices at the molecular scale.

(c) **STUDY ON THE RESPONSIBLE DEVELOPMENT OF NANOTECHNOLOGY.**—As part of the first triennial review conducted in accordance with subsection (a), the National Research Council shall conduct a one-time study to assess the need for standards, guidelines, or strategies for ensuring the responsible development of nanotechnology, including, but not limited to—

(1) self-replicating nanoscale machines or devices;

(2) the release of such machines in natural environments;

(3) encryption;

(4) the development of defensive technologies;

(5) the use of nanotechnology in the enhancement of human intelligence; and

(6) the use of nanotechnology in developing artificial intelligence.

(d) **EVALUATION TO BE TRANSMITTED TO CONGRESS.**—The Director of the National Nanotechnology Coordination Office shall transmit the results of any evaluation for which it made arrangements under subsection (a) to the Advisory Panel, the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science upon receipt. The first such evaluation shall be transmitted no later than June 10, 2005, with subsequent evaluations transmitted to the Committees every 3 years thereafter.

#### SEC. 6. AUTHORIZATION OF APPROPRIATIONS.

(a) **NATIONAL SCIENCE FOUNDATION.**—There are authorized to be appropriated to the Director of the National Science Foundation to carry out the Director's responsibilities under this Act—

(1) \$385,000,000 for fiscal year 2005;

(2) \$424,000,000 for fiscal year 2006;

(3) \$449,000,000 for fiscal year 2007; and

(4) \$476,000,000 for fiscal year 2008.

(b) **DEPARTMENT OF ENERGY.**—There are authorized to be appropriated to the Secretary of Energy to carry out the Secretary's responsibilities under this Act—

(1) \$317,000,000 for fiscal year 2005;

(2) \$347,000,000 for fiscal year 2006;

(3) \$380,000,000 for fiscal year 2007; and

(4) \$415,000,000 for fiscal year 2008.

(c) **NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.**—There are authorized to be appropriated to the Administrator of the National Aeronautics and Space Administration to carry out the Administrator's responsibilities under this Act—

(1) \$34,100,000 for fiscal year 2005;

(2) \$37,500,000 for fiscal year 2006;

(3) \$40,000,000 for fiscal year 2007; and

(4) \$42,300,000 for fiscal year 2008.

(d) **NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.**—There are authorized to be appropriated to the Director of the National Institute of Standards and Technology to carry out the Director's responsibilities under this Act—

(1) \$68,200,000 for fiscal year 2005;

(2) \$75,000,000 for fiscal year 2006;

(3) \$80,000,000 for fiscal year 2007; and

(4) \$84,000,000 for fiscal year 2008.

(e) **ENVIRONMENTAL PROTECTION AGENCY.**—There are authorized to be appropriated to the Administrator of the Environmental Protection Agency to carry out the Administrator's responsibilities under this Act—

(1) \$5,500,000 for fiscal year 2005;

(2) \$6,050,000 for fiscal year 2006;

(3) \$6,413,000 for fiscal year 2007; and

(4) \$6,800,000 for fiscal year 2008.

#### SEC. 7. DEPARTMENT OF COMMERCE PROGRAMS.

(a) **NIST PROGRAMS.**—The Director of the National Institute of Standards and Technology shall—

(1) as part of the Program activities under section 2(b)(7), establish a program to conduct basic research on issues related to the development and manufacture of nanotechnology, including metrology; reliability and quality assurance; processes control; and manufacturing best practices; and

(2) utilize the Manufacturing Extension Partnership program to the extent possible to ensure that the research conducted under paragraph (1) reaches small- and medium-sized manufacturing companies.

(b) **CLEARINGHOUSE.**—The Secretary of Commerce or his designee, in consultation with the National Nanotechnology Coordination Office and, to the extent possible, utilizing resources at the National Technical Information Service, shall establish a clearinghouse of information related to commercialization of nanotechnology research, including information relating to activities by regional, State, and local commercial nanotechnology initiatives; transition of research, technologies, and concepts from Federal nanotechnology research and development programs into commercial and military products; best practices by government, universities and private sector laboratories transitioning technology to commercial use; examples of ways to overcome barriers and challenges to technology deployment; and use of manufacturing infrastructure and workforce.

#### SEC. 8. DEPARTMENT OF ENERGY PROGRAMS.

(a) **RESEARCH CONSORTIA.**—

(1) **DEPARTMENT OF ENERGY PROGRAM.**—The Secretary of Energy shall establish a program to support, on a merit-reviewed and competitive basis, consortia to conduct interdisciplinary nanotechnology research and development designed to integrate newly developed nanotechnology and microfluidic tools with systems biology and molecular imaging.

(2) **AUTHORIZATION OF APPROPRIATIONS.**—Of the sums authorized for the Department of Energy under section 6(b), \$25,000,000 shall be used for each fiscal year 2005 through 2008 to carry out this section. Of these amounts, not less than \$10,000,000 shall be provided to at least 1 consortium for each fiscal year.

(b) **RESEARCH CENTERS AND MAJOR INSTRUMENTATION.**—The Secretary of Energy shall carry out projects to develop, plan, construct, acquire, operate, or support special equipment, instrumentation, or facilities for investigators conducting research and development in nanotechnology.

#### SEC. 9. ADDITIONAL CENTERS.

(a) **AMERICAN NANOTECHNOLOGY PREPAREDNESS CENTER.**—The Program shall provide for the establishment, on a merit-reviewed and competitive basis, of an American Nanotechnology Preparedness Center which shall—

(1) conduct, coordinate, collect, and disseminate studies on the societal, ethical, environmental, educational, legal, and workforce implications of nanotechnology; and

(2) identify anticipated issues related to the responsible research, development, and application of nanotechnology, as well as provide recommendations for preventing or addressing such issues.

(b) **CENTER FOR NANOMATERIALS MANUFACTURING.**—The Program shall provide for the establishment, on a merit-reviewed and competitive basis, of a center to—

(1) encourage, conduct, coordinate, commission, collect, and disseminate research on new manufacturing technologies for materials, devices, and systems with new combinations of characteristics, such as, but not limited to, strength, toughness, density, conductivity, flame resistance, and membrane separation characteristics; and

(2) develop mechanisms to transfer such manufacturing technologies to United States industries.

(c) **REPORTS.**—The Council, through the Director of the National Nanotechnology Coordination Office, shall submit to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science—

(1) within 6 months after the date of enactment of this Act, a report identifying which agency shall be the lead agency and which other agencies, if any, will be responsible for establishing the Centers described in this section; and

(2) within 18 months after the date of enactment of this Act, a report describing how the Centers described in this section have been established.

#### SEC. 10. DEFINITIONS.

In this Act:

(1) **ADVISORY PANEL.**—The term "Advisory Panel" means the President's National Nanotechnology Advisory Panel established or designated under section 4.

(2) **NANOTECHNOLOGY.**—The term "nanotechnology" means the science and technology that will enable one to understand, measure, manipulate, and manufacture at the atomic, molecular, and supramolecular levels, aimed at creating materials, devices, and systems with fundamentally new molecular organization, properties, and functions.

(3) **PROGRAM.**—The term "Program" means the National Nanotechnology Program established under section 2.

(4) **COUNCIL.**—The term "Council" means the National Science and Technology Council or an appropriate subgroup designated by the Council under section 2(c).

(5) **ADVANCED TECHNOLOGY USER FACILITY.**—The term "advanced technology user facility" means a nanotechnology research and development facility supported, in whole or in part, by Federal funds that is open to all United States researchers on a competitive, merit-reviewed basis.

(6) **PROGRAM COMPONENT AREA.**—The term "program component area" means a major subject area established under section 2(c)(2) under which is grouped related individual projects and activities carried out under the Program.

### AUTHORITY FOR COMMITTEES TO MEET

#### COMMITTEE ON ARMED SERVICES

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on Armed Services be authorized to meet during the session of the Senate on Tuesday, November 18, 2003, at 4 p.m., in open session, to consider the nomination of the Honorable Michael W. Wynne to be Under Secretary of Defense for Acquisition, Technology, and Logistics.

The PRESIDING OFFICER. Without objection, it is so ordered.

#### COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on

Banking, Housing, and Urban Affairs be authorized to meet during the session of the Senate on November 18, 2003, at 10 a.m. to conduct a hearing on the "Review of Current Investigations and Regulatory Actions Regarding the Mutual Fund Industry."

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on Commerce, Science, and Transportation be authorized to meet on Tuesday, November 18, 2003, in the President's Room, immediately following the first vote, on pending committee business.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON FINANCE

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on Finance be authorized to meet during the session on Tuesday, November 18, 2003, at 10 a.m., to hear testimony on nomination of Arnold I. Havens, to be General Counsel for the Department of the Treasury.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON GOVERNMENTAL AFFAIRS

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on Governmental Affairs be authorized to meet on Tuesday, November 18, 2003, at 2:30 p.m. for a hearing to consider the nomination of James M. Loy to be Deputy Secretary of Homeland Security, Department of Homeland Security.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE ON THE JUDICIARY

Mr. BOND. Mr. President, I ask unanimous consent that the Committee on the Judiciary be authorized to meet to conduct a hearing on Tuesday, November 18, 2003, at 9:30 a.m. on "America after 9/11: Freedom Preserved or Freedom Lost?" in the Dirksen Senate Office Building Room 226.

Panel I: Bob Barr, Former United States Representative, Atlanta, GA; Viet Dinh, Professor, Georgetown University Law Center, Washington, DC; James Zogby, Arab American Institute, Washington, DC; James Dempsey, Center for Democracy and Technology, Washington, DC; Robert Cleary, Proskauer Rose, LLP, New York, NY; Nadine Strossen, President, American Civil Liberties Union, New York, NY; and Muzaffar Chishty, Director, Migration Policy Institute at New York University School of Law, New York, NY.

The PRESIDING OFFICER. Without objection, it is so ordered.

SUBCOMMITTEE ON PUBLIC LANDS AND FORESTS

Mr. BOND. Mr. President, I ask unanimous consent that the subcommittee on Public Lands and Forests of the Committee on Energy and Natural Resources be authorized to meet during the session of the Senate on Tuesday, November 18, at 2:30 p.m.

The purpose of the hearings is to receive testimony on S. 1467, a bill to es-

tablish the Rio Grande outstanding natural area in the state of Colorado, and for other purposes, S. 1209, a bill to provide for the acquisition of property in Washington County, Utah, for implementation of a desert tortoise habitat conservation plan, and H.R. 708, a bill to require the conveyance of certain national forest system lands in Mendocino National Forest, California, to provide for the use of the proceeds from such conveyance for national forest purposes, and for other purposes; S. 1167, which would resolve boundary conflicts in Barry and Stone counties in the State of Missouri, and S. 1848, which would amend the Bend Pine Nursery Land Conveyance Act to direct the Secretary of Agriculture to sell the Bend Pine Nursery Administrative site in the State of Oregon.

The PRESIDING OFFICER. Without objection, it is so ordered.

SUBCOMMITTEE ON STRATEGIC FORCES

Mr. BOND. Mr. President, I ask unanimous consent that the subcommittee on strategic forces of the committee on armed services be authorized to meet during the session of the Senate on Tuesday, November 18, 2003, at 2:00 p.m., in open session to receive testimony on space acquisition policies and processes.

The PRESIDING OFFICER. Without objection, it is so ordered.

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

Mr. BOND. Mr. President, I ask unanimous consent that the Permanent Subcommittee on Investigations of the Committee on Governmental Affairs be authorized to meet on Tuesday, November 18, 2003, at 9:30 a.m. for a hearing entitled "U.S. Tax Shelter Industry: The Role of Accountants, Lawyers and Financial Professionals."

The PRESIDING OFFICER. Without objection, it is so ordered.

The PRESIDING OFFICER. The majority leader.

HONORING OUR ARMED FORCES

Mr. FRIST. Mr. President, I rise to honor the 17 soldiers who lost their lives this past Saturday in Iraq when two Black Hawk helicopters collided.

This tragedy stands as the deadliest single incident since Operation Iraqi Freedom began in March. It is the largest single loss of life for the 101st Airborne in 15 years.

All 17 young soldiers served in the 101st Airborne Division based at Fort Campbell. All 17 died serving their country with valor and with courage.

I would like to read each of their names for the RECORD:

SGT Michael D. Acklin, II, age 25, of Louisville, KY; SPC Ryan T. Baker, age 24, of Browns Mills, NJ; SFC Kelly Bolor, age 37, of Whittier, CA; SPC Jeremy DiGiovanni, age 21, of Pricedale, MS; SPC William D. Dusenbery, age 30, of Fairview Heights, IL; PFC Rick Hafer, age 21, of Nitro, WV; SGT Warren S. Hansen, age 36, of Clintonville, WI; PFC Sheldon R. Hawk Eagle, age 21, of Grand Forks, ND; PFC Damian L. Heidelberg, age 21, of MS; CWO Erik C. Kesterson,

age 29, of Independence, OR; 1LT Pierre Piche, age 28, of Starksboro, VT; SGT John W. Russell, age 26, of Portland, TX; CWO Scott A. Saboe, age 33, of Willow Lake, SD; SPC John R. Sullivan, age 26, of Countryside, IL; SPC Eugene A. Uhl, III, age 21, of Amherst, WI; PFC Joey Whitener, age 19, of McDowell County, NC; 2LT Jeremy L. Wolfe, age 27, of Menomonie, WI.

Mr. President, my heart goes out to the families of these brave young men. America mourns your loss and honors you for the profound sacrifice you must now bear.

My heart goes out to the community of Fort Campbell which grieves the loss of these 17 young men and the 36 other valiant soldiers of the 101st who have lost their lives since the war in Iraq began. Each and every one of these soldiers is a credit to our country.

The great American philosopher and poet Ralph Waldo Emerson wrote: "Peace has its victories, but it takes brave men and women to win them."

We will press forward in honor of those who have lost their lives fighting this just and honorable war. With their names emblazoned on our hearts, we will secure the victories of peace.

God bless them. God bless their families. And God bless America.

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS ACT, 2004—CONFERENCE REPORT

Mr. FRIST. Mr. President, I ask unanimous consent that the Senate now proceed to the consideration of the conference report to accompany H.R. 2754, the energy and water appropriations bill.

The PRESIDING OFFICER. Is there objection?

Without objection, it is so ordered.

The Senate proceeded to consider the conference report.

(The text of the Conference Report is printed in the proceedings of the House in the RECORD of November 7, 2003.)

Mr. DOMENICI. Mr. President, today I bring to the floor the Energy and Water Development Appropriations conference report for fiscal year 2004, approved by the conference committee last week.

My ranking member, Senator REID, and I have worked very hard this year to put together a fair conference report under extremely difficult circumstances.

For fiscal year 2004, the allocation to the conference committee was \$27.3 billion, an amount that is only \$381.8 million over the President's request. This situation posed a daunting challenge to the conference, both in terms of funding and philosophy.

As many of my colleagues know, the President's request dramatically cut water projects well below the current year level. In fact, the President's request was \$530 million below the current year level for water projects, and we received an increased allocation smaller than what we considered the total need of our conference report.

Thus, the increased allocation, along with other funding adjustments, was